



Abt Associates Inc.

Summary Report: Primary Health Care Equipment for Iraq Primary Health Care Clinics

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In collaboration with officials and staff of
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Introduction

The Iraq Health System Strengthening project (IHSS) was designed to support the long-term development of the Iraq health system. IHSS has taken a dual or “top-down bottom-up” approach to achieving this goal. This includes providing support for policy development and Ministry of Health (MOH) capacity building, which provides a foundation for both short- and long-term implementation of health sector reform initiatives (top-down). This is complemented with support for health care delivery, specifically primary health care (PHC), in the form of training and equipping of PHC providers (bottom-up).

The need for bottom-up support in the Iraq health system is clear as evident from a broad assessment of the health care system^{1 2} and more specifically PHC capability³. In support of strengthening the Iraq PHC delivery system, the IHSS project provided kits of PHC equipment for delivery to over 600 PHC clinics throughout Iraq. This document summarizes this component of the IHSS project and provides supporting documents related to MOH involvement, clinic selection, and kit content. It further describes the process for final delivery of PHC kits and documents participation and agreement of this process by the MOH.

Equipment Selection

PHC equipment was selected in collaboration with USAID and the MOH. An initial proposed list of PHC equipment was presented for review by the Iraqi Director General (DG) of Public Health and Primary Health Care. The list was modified and approved by the DG, with subsequent approval to procure provided by USAID.

The final equipment list consisted of the following items:

¹ Field Visits to 11 Governorates by IHSS Staff: A Trip Report. *Iraq Health System Strengthening Project.* Abt Associates Inc. (July 2003). Nagib Hussein, Xingzhu Liu.

² Iraq Health Inputs, Indicators, and Facilities: Baseline Data for the Iraqi Health System Strengthening Project. *Iraq Health System Strengthening Project.* Abt Associates Inc. and Huffman and Carpenter (July 2003). Jeanne Wendel.

³ Primary Healthcare Center Survey in Iraq: A Consolidated Report. *Iraq Health System Strengthening Project.* Abt Associates Inc (March 2004). Xingzhu Liu, Namir Al-Tawil.

Basic Equipment Kit

- Goose Neck lamp
- EPI sterilizer or autoclave
- Adult scale with height measurement
- Pediatric scale
- Infant length board
- Mayo stand/instrument tray

Basic Instrument Kit

- Diagnostic set (otoscope, ophthalmoscope)
- Sphygmomanometer and cuffs (large adult, normal adult, child cuffs)
- Stethoscope
- Oral and rectal thermometers
- Reflex hammers
- Tuning forks (256 & 512 Hz.)
- Fetal heart tone detector (Doptone)
- Glucometer and test strips
- Peak flow meter, adult and child size
- Vaginal speculae
- IUD kits (multitoothed tenaculum, uterine sound, long ring forceps, long dressing forceps)
- Suture instrument kits (needle holder, small curved hemostat, scalpel handle, Adson forceps, suture scissors, small curved Metzenbaum scissors)
- Stainless steel bowls, 2 sizes
- Kidney basins
- Dressing scissors
- Sharps disposal containers
- Basins for decontamination of instruments
- Trash bucket with cover (med. size)
- Emergency kit (nasopharyngeal airways, Ambubag, suction machine, IV stand, emergency drug box)

Furniture kit

- Gyn Exam table with stirrups
- Basic Exam table
- Exam stool on wheels
- Waiting room chairs
- Privacy curtains
- Book shelf
- Instrument cabinet with lock
- Office desk
- Office chairs
- File cabinet
- Bulletin Board (large size)

Laboratory kit

- Microscope and light source
- Urine centrifuge
- Spectrophotometer
- Water bath
- Cell counting chamber
- WBC and RBC pipettes
- Centrifuge tubes
- Blood drawing chair
- Tourniquet
- Timer
- Reagent pipettes
- Reagent flasks
- Test tube racks
- Test tubes

Following agreement on the composition of the PHC equipment kit, assessment of the need for this equipment at the PHC clinic level was performed. This assessment⁴ was

⁴ Ibid

conducted in 214 clinics in 5 governorates (Tameem, Wasit, Basra, Ninawa, Thi-Qar, Karbala, and Najaf). PHC clinic managers were asked to indicate the degree that select items on the PHC equipment list were needed at their individual clinic. As can be seen from Table 1, this assessment found that the designed equipment kit largely reflects the needs of PHC clinics in Iraq.

Table 1. The percentage of PHC clinics reporting a need for PHC equipment.

Item of equipment	Needed		Not needed	
	Clinics	%	Clinics	%
Instrument cabinet with lock	210	98.13	4	1.87
Book shelf	207	96.73	7	3.27
Basins for decontamination of instruments	204	95.33	10	4.67
Office chairs	202	95.28	10	4.72
Diagnostic set (otoscope, ophthalmoscope)	203	94.86	11	5.14
Reflex hammers	203	94.86	11	5.14
Privacy curtains	203	94.86	11	5.14
File cabinets	201	94.81	11	5.19
Trash buckets with cover	200	94.79	11	5.21
Emergency kit	159	94.08	10	5.92
Sharps disposal containers	201	93.93	13	6.07
Sphygmomanometer	200	93.90	13	6.10
Fetal heart tone detector	200	93.46	14	6.54
Dressing scissors	199	93.43	14	6.57
Office desks	199	93.43	14	6.57
Test tubes	198	93.40	14	6.60
Tourniquet	197	92.92	15	7.08
Timer	197	92.49	16	7.51
Centrifuge tubes	196	92.02	17	7.98
Adult scale with height measurement	196	91.59	18	8.41
Reagent pipettes	195	91.55	18	8.45
WBC & RBC pipettes	194	91.51	18	8.49
Tuning forks	195	91.12	19	8.88
Test tube rack	193	90.61	20	9.39
Reagent flasks	192	90.57	20	9.43
Stainless steel bowls, 2 sizes	193	90.19	21	9.81
Pediatric scale	191	89.25	23	10.75
Infant length board	191	89.25	23	10.75
Oral & rectal thermometers	191	89.25	23	10.75
Kidney basins	191	89.25	23	10.75

Exam. stool on wheels	191	89.25	23	10.75
Glucometer and test strips	189	88.32	25	11.68
Stethoscope	187	87.79	26	12.21
Suture instrument kits	181	87.44	26	12.56
Basic exam. Table	187	87.38	27	12.62
Cell counting chamber	184	86.79	28	13.21
Vaginal speculae (3 sizes)	183	85.51	31	14.49
Bulletin boards	168	80.38	41	19.62
Gyn. exam. table with stirrups	166	78.30	46	21.70
Spectrophotometer	166	77.93	47	22.07
Water bath	161	75.94	51	24.06
Blood drawing chair	161	75.59	52	24.41
Mayo stand/instrument tray	151	71.56	60	28.44
Urine centrifuge	148	70.14	63	29.86
Microscope and light source	144	67.61	69	32.39
Peak flow meter (adult and child)	144	67.29	70	32.71
IUD kits	124	58.22	89	41.78

Selection of Clinics

The goal of the PHC equipment procurement effort was to strengthen the ability of the Iraqi MOH to delivery PHC. In line with this, clinics were selected based on their current capability to provide care, the presence of a MOH staff physician, participation of staff in the IHSS PHC training program, and participation in one or more of the rehabilitation efforts managed by other implementing partners.

Out of the more than 2000 clinics in Iraq, 834 are staffed by physicians. From this pool, clinics were first selected from the 7 core governorates in which the IHSS project was providing PHC training. These included Basra, Thi-Qar, Wassit, Najaf, Karbala, Tameem, and Ninnewa. Clinics that were to be rehabilitated by Bechtel and RTI were added to the list. Finally the MOH selected the remaining clinics and focused on equitable distribution across all 18 governorates. Regional IHSS staff proceeded to verify location, point-of-contacts and capability of these clinics. Detailed lists of these clinics are presented in **Appendix A** and segregated into North, Central, and South regions.

Equipment Procurement and Packaging

Following finalization of the equipment contained in the PHC equipment kit, Abt Associates moved forward with procurement in two phases. The first phase involved a small procurement of equipment for 7 kits for initial kitting and delivery to clinics in Iraq in order to test the logistics and delivery processes that would be employed within the central and governorate levels of the MOH. In parallel, Abt engaged the agreed upon

procurement subcontractor, Trans Century Associates (TCA) for the larger procurement of equipment for 600 kits. A timeline of this process including dates of necessary approvals and other milestones is shown in Table 2 below. A detailed description of each of the 58 items in the equipment kit is presented for reference as **Appendix B**. The quantities procured per kit are shown in **Appendix C**.

Table 2: Chronology of Primary Health Care Equipment Procurement

No.	Action	Date of Initial Action Or Date Request Submitted	Date of Final Action Or Date Approval Received	Interim Period	Comment
1.	PHC Equipment List Submitted to USAID	Aug. 4, 2003	Oct. 24, 2003 from CO	81 days	Abt made several follow-up requests. MOH/CPA delay in part related to the issue of "Buy Iraq" possibilities. . <ul style="list-style-type: none"> • 9/6 Jeff Gould follow-up with Greg Martin • 9/30 Jeff Gould follow-up with D. Simms • 10/6 Jeff Gould Follow-up with D. Simms • 10/14 D Simms indicates that procurement list is in MOH/CPA review • 10/14 D. Simms requested Abt for one page summary of procurement plan , estimated deliver dates etc. • 10/23 Abt submitted requested procurement Plan • 10/24 D Simms approved IHSS list and plan.
2.	Abt Submitted TCA Task Assignment to CTO as directed by CO	Oct. 30, 2003	Nov. 10, 2003	11 days	Procurement Contractor scope of work and funding modified to reflect a single IFB solicitation (USAID CO Changed)
4	Advertisement in ABS of Invitation for Bid IFB	November 4			30 day IFB minimum Bid cycle. This is a 935 solicitation to equip 600 clinics.
5.	IFB Bid Opening Date at Subcontractor's Office	December 2			End of 30 day Bid prep period. Total of 47 bid submissions
6.	IFB Vendor Selection Period	Dec. 03-20, 2003		17days	Includes TCA Cost and Tech Review , Vendor clarification and Abt Technical Review
7.	IFB Submission to CO for approval as	Dec. 27, 2003	Jan. 6, 2004	10 days	IFB is \$2.7 Million package for CO approval.

	required by H.7 of contract				
8.	Purchase Contracts Issued by Procurement Subcontractor	January 16 2004			Vendors Sent Purchase Contract which Abt reviewed and approved
9	Written Acceptance of Purchase Contracts by Vendors	Jan 20-Feb 22, 2004		30 days	Some Vendors delayed in signing PC and required additional clarifications.
10.	Order Processing Vendor (manufacturing Period)	Feb 1-Mar 15		45 days	In most cases no off the shelf product available, items have to be manufactured
11	Abt begins consolidated Air shipment of late Manufactured Items . Shipping priority placed on items needed to produce first 200 Kits.	March 24			Consolidation shipping Points include USA, Pakistan, India, China, Taiwan and Germany. USAID advised congestion at Aquaba ports and delays in other ports
12.	Sub-kitting of IFB Equipment starts in Jordan	March 25			USAID freight forwarder finalizes kitting arrangements using "lift vans" containers.
13.	Last IFB equipment items arrive in Jordan to Manufacture 200 Kits	April 15			Jordan kitting operations in full production.
14.	40 IFB Kits delivered in Baghdad from Jordan	May 10			Kits are transported on flat bed trailers with 10 kits to a trailer
15	Last Abt Air shipment delivered to Jordan Free Zone warehouse	May 16			Vendor Purchase Contract cancellation in April delayed delivery of autoclaves. Abt procurement and delivery to logistics contractor complete.
16	330 IFB Kits Completed 290 in Jordan Warehouse waiting transport to Iraq	May 30			Kit production averages 40 kits per working day.

As directed by USAID, Abt delivered equipment to the Iraq logistics contractor Logenix for initial receipt and warehousing in Amman, Jordan, packaging and kitting of equipment for each kit, and final transport into Iraq to the selected clinic. As can be seen from Table 2, a combination of events resulted in the delay of equipment reaching the central warehouse and kitting facility in Amman, Jordan. This was principally due to delays in receiving approval to initiate the procurement (81 days). This was exacerbated by delays in receiving certain items (ie autoclaves). Because of these delays, the decision was made to focus our procurement efforts so as to ensure the receipt of sufficient equipment to complete 200 kits as rapidly as possible. This was accomplished by April 15, 2004. All remaining equipment was received in Amman Jordan by May 16, 2004.

As part of the PHC equipment kit, Abt compiled a User's Manual⁵ that was included in each kit. This manual served as a guide to health clinic managers and potential users of the PHC equipment. It was delivered to each clinic along with equipment and includes specifications, instructions for use, maintenance instructions, manufacturer contact, and warranty information for each item.

Delivery

The strategy for final delivery of PHC equipment to the selected clinics involved close collaboration with the Iraqi MOH and was managed by the USAID logistics contractor Logenix. Abt provided assistance by coordinating the strategy with the MOH. This resulted in formal approval of the strategy and is documented in letters signed by the DG of Public Health and distributed to all governorate DOHs. These letters are provided in **Appendix D** along with their respective English translation.

The process used for in-country transport and delivery and detailed in **Appendix D**, was under the complete control of Logenix. This included kitting and transport of kits from Amman Jordan, storing and securing equipment in regional Iraq warehouses, reviewing delivery sites, scheduling transport, movement of equipment, security during transport, obtaining initial signatures verifying clinic delivery, and ensuring these delivery receipts were received by USAID. Abt provided support regarding the collection of DOH documents resulting from entering the equipment into the appropriate MOH inventory. However, this was entirely dependent on the actions of DOH personnel of which Abt had no control.

Abt's principal responsibilities were complete once all equipment was procured and recieved in the Logenix warehouse in Amman, Jordan. Abt has had no control over the process from that point forward. However, Abt staff continued to support the process by working with local DOH representatives and helping to coordinate delivery with clinic staff, DOH staff, and Logenix where possible.

⁵ Medical Kit Equipment Information, User Manual, and Assembly Guide for Primary Health Clinics in Iraq. *Iraq Health Systems Strengthening Project*, Abt Associates Inc. Rebecca Jewsbury, Don Henry, Scott Leshner, and Alan Stankus (April 2004).

As a result of the dangerous and ever changing security environment in Iraq, only 342 of the over 600 kits had been delivered as of October 10, 2004. This is in spite of all equipment being received by May 16, 2004. Delivery began in the southern areas of Iraq, including Basra and surrounding areas and has proceeded to include the central region in and around Baghdad. No information is available from Logenix at this writing which may indicate an estimated date for completion of PHC kit delivery.

Summary

It is important to note that there were many challenges faced during implementation of this activity. Some of these challenges were due to the unique and difficult environment of post-war Iraq. These are persistent and will continue to have a negative impact on the completion of PHC kit delivery. As delivery-route security continues to erode and threats against drivers and others associated with humanitarian support increases, the ability to provide broad assistance to health care providers in Iraq will be very limited.

In addition to environmentally imposed delivery delays, the project also experienced significant delays in completion of procurement and receipt of equipment in Amman, Jordan. Certain delays were due to poor performance of vendors but the most significant delay that could have been avoided was the more than 80 day delay in receiving approval to procure from USAID (Table 2). Once procurement began, the process was complete in just over 6 months, which is a reasonable period for completion of an IFB procurement. Other minor delays associated with transport and customs clearance of items such as autoclaves were dealt with. However, as these delays occurred toward the end of the procurement, they had a much larger perceived impact.

Changes at the CPA/MOH level also affected the project. When this activity began, the MOH was being managed under the direct supervision of the CPA and the CPA Senior Health Advisor. Under this leadership, decisions were made regarding the manner by which equipment would be delivered to clinics and the inventory control processes that would be employed. When the Iraqi government assumed control of the MOH in March 2004, this process was revisited and lengthy discussions and reworking of the strategy proceeded. In the end, a plan was devised that met the concerns of the MOH and MOH inventory control while at the same time meeting the approval of the logistics contractor and governorate health representatives. This process underscored the importance of ensuring that MOH objectives were an integral part of the process. As with all aspects of the IHSS Project, coordination with the in-country stakeholder was a common theme.

In summary, the delivery of equipment to PHC clinics in Iraq is an important part of the health service delivery strengthening component of the IHSS Project. The work that was performed in support of this clearly shows that the equipment contained in these kits meets the needs of health care providers based on their own assessment. This was also verified at the central MOH level. When delivery is complete, this activity will impact on over 70% of the PHC clinics in Iraq that are staffed by an MOH physician.

This coupled with PHC provider training, will result in a significant increase in the capability of PHC providers to delivery care to the Iraqi population.

APPENDICES

**APPENDIX A: LIST OF CLINICS SELECTED TO RECEIVE
PHC EQUIPMENT**

APPENDIX B: IHSS Basic Medical Kits Specifications

Item # 1

Goose Lamp, OB/GYN Examination

Specifications

- Goose Floor lamp
- Flexible arm that can be freely moved in all directions
- Adjustable height.
- Made of durable metal stainless steel, chrome plated steel or baked on enamel steel (or equivalent.)
- Heavy duty base on caster wheels
- For regular screw in electrical bulbs
- With on/off switch
- Electrical requirement 220V/50Hz.



Item #2

Autoclave

Specifications

- Self-contained sterilizer.
- Heavy cast aluminum with an immersion heating element.
- Automatic release valve.
- Pressure gauge.
- Pilot light.
- Metal-to-metal seal to eliminate all rubber gaskets and clamping locks to prevent removal of the cover while pressure is present.
- Double safety locking to prevent opening while pressurized.
- Timer.
- Temperature selection.
- Capacity: 25 qt. Weight: 31 lb.
- Support base to avoid heat damage to surfaces.



- 220 Volts and 50 Hertz.

Item # 3

Adult Scale with height measurement.

Specifications

- Hospital/clinic scale with 100 gm increments.
- Maximum weight 150 Kg.
- Slip resistant mat.
- Built-in beam lock and hand operated balance adjustment
- Cast metal base gives accuracy on carpets or uneven floors



Item # 4

Pediatric scale

Specifications

- Suitable for newborns
- 10 gm increment
- Up to 7 Kg
- Baby tray has no seams or screws on upper surface & removes for easy washing & disinfecting. With smooth edges to hold babies.
- Stable & lightweight steel base design for portability
- Robust
- Easy to clean



Item # 5

Infant length board.

Specifications

- To measure new born heights
- With a movable arm
- Made of wood preferably

- To show height in cms up to 75cm.
- For hospital and clinic use.

Item # 6

Mayo stand/Instrument tray.

Specifications

- Mayo stand for use in obstetrical delivery room
- Stainless steel construction
- Wide –spread, low center, heavy base design to ensure non-tipping, non-wobbling stability
- Three caster wheels
- Adjustable height (hand adjustable), approximate adjustment: 100-155 cm
- Approximate dimensions of tray: 48cm (L) x 32 (W)



Item # 7

Otoscope Ophthalmoscope Set

Specifications

- Standard rechargeable ophthalmoscope
- Halogen light for true tissue color and consistent, long lasting illumination.
- 6 apertures for all general and specialist use.
- 28 lenses –25 to + 40 diopters for better resolution.
- Rubber brow rest prevents scratching of eyeglasses.
- Illuminated lens dial clearly identifies setting.
- Halogen replacement lamp.
- All accessories should be quoted separately.
 - Pneumatic Consulting 3.5V rechargeable Otoscope



- Halogen Lamp that provides 30% more light output, for true tissue color and consistent, long lasting illumination.
- Two viewing lenses for dual observation; teaching; consulting.
- Fiber optic illumination for cool light.
- Sealed system for pneumatic otoscopy.
- Rotatable head for left and right sided viewing.
- With five polypropylene specula, sizes 2,3,4, 5 and 9 mm
- With insuflator bulb and tube
- Halogen replacement lamp
- All optional accessories should be quoted separately.
- Equal to Welch Allen.

Item # 8

Sphygmomanometer

Specifications

- Professional Mercurial Sphygmomanometer
- 2 Adult cuff with Velcro closure one standard and one large sizes, 1 child cuff.
- Mercurial scale 0-300mm Hg in protective housing
- Desk model in self-contained case
- Two (2) spare cuffs of each size.
- Two (2) spare bulbs with release valves



Item # 9

Stethoscopes, Pediatric

Specifications

Stainless Steel head chest piece

- Chrome plated rotating stem
- Diaphragm/bell 47cm & 25 cm diameter (approx.)
- Stainless steel binaural with internal spring
- Non-Chill rubber ring
- White plastic ear tips
- 60 cm (approx.) "Y" tubing
- Additional diaphragm and ear tips included.



- Equal to littman.

Item # 10

Fetal Heart Detector

Specifications

- Light weight, portable (hand-held)
- Speaker output provides clear and distinct doppler sound
- Obstetric probe 3 Mhz for detection of fetal sounds
- Earphone
- Rechargeable
- Power indicator
- With probe protective built in socket
- Carrying case
- NOTE: Supplier must provide a list of typical spare parts and consumable supplies required for operation of item over a two (2) year period, including quantities and unit cost.

Item # 11

Stethoscope, Adult

Specifications

- Stainless steel dual head chest piece
- Stainless steel binaural with internal spring
- Non-Chill rubber ring
- White plastic ear tips
- 56 cm (approx.) “Y” black tubing
- Additional diaphragm and ear tips included.
- Equal to Littman.



Item # 12

Thermometer, Oral

Specifications

- Clinical glass thermometer
- Oral
- Prismatic Magnifying lens
- Celsius scale



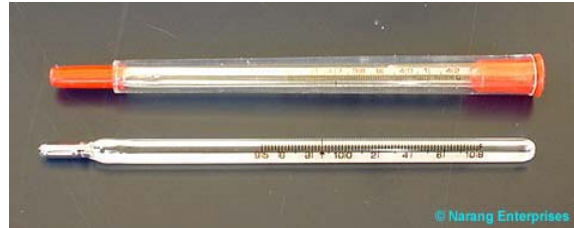
- Range: 35-42°C
- In protective case

Item # 13

Thermometer, Rectal

Specifications

- Clinical neonatal glass thermometer
- Prismatic Magnifying lens
- Celsius scale
- Range: 30-40°C
- In protective case



Item # 14

Reflex Hammers

Specifications

- Standard clinical reflex hammer
- Durable
- Easy to clean
- Resistant



Item # 15

Tuning forks

Specifications

- To check the hearing
- Set of 5 pieces of different



capabilities
frequencies.

Item # 16

Glucometer and test strips

- Easy to use
- 50 strips must be included with each machine
- strips must be available in Iraq or at least in the region.

Item # 17

Peak flow meter

- Adult and child size
- Regular
- Hand held for easy use
- Color indicators for easy reference
- Easy to clean
- Includes Peak flow diary to track your measurements



Item # 18

Vaginal Graves specula

Specifications

Set speculum retractor 2 sizes:

- 70 x 40mm/70 x 33mm valve (medium)
- 90 x 40mm/90 x 33mm valve (large)
- large, medium, & small
- Stainless steel

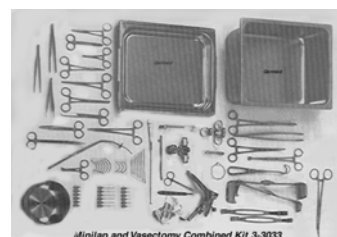


Item # 19

IUD Kits

Specifications

- Multitoothed teniculum: 9"
- Uterine sound: 7"
- Long ring forceps: 9.5"
- Long dressing forceps: with serrated tip
weck-Pattern standard tips Bright Finish 12" (40.4 cm) tip 5.0 mm
- Speculum – Graves, medium.



Item # 20

Suture instrument kits

Specifications



- Needle holder: 8"
- Small curved hemostat:
- Scalpel handle with a pack of 100 blades (#11 & 15)
- Forceps suture scissors straight and curved 8"

Item # 21

Stainless steel bowls

Specifications

- Round Stainless Steel bowls
- Non-rusting material
- Small
- Medium
- Large



Item # 22

Kidney Basins

Specifications

- Stainless Steel kidney shaped basins
- Non-rusting material
- Large
- Medium

Item # 23

Dressing scissors

Specifications

- Stainless steel
- Non –rusting
- Size : 8"



Item # 24

Sharp disposable containers

Specifications



- Disposable Hanging buckets with attached lid.
- Bucket wall holder.
- Clearly marked as a sharp items disposable bucket.

Item # 25

Buckets for decontamination

Specifications

- Big containers (approx. 20 L) with step on lid.
- Disposable big Yellow color Bags.

Item #26

Trash Bucket with Cover

- Steel construction
- Swing top
- 24 Gallon capacity
- White color

Item # 27

Nasopharyngeal For Emergency Kit

Specifications

- Sizes: 2, 3 & 4



airways

Item # 28

Ambubag For Emergency Kit

Specifications

- Adult and child sizes manual operation
- Self-inflating rubber bag with inlet valve
- Inflating valve (peep)
- Adult and Child facemask
- Autoclavable

- Relief valve that works when pressure exceeds 30 mm Hg
- Airway size 00,0 & 1
- Oxygen reservoir bag
- 2 spare masks of each size.

Item # 29

Suction machine For Emergency Kit

Specifications

- For mucus suction
- Disposable suction tubing
- Pediatric and adult suction tips (stainless steel)
- Light weight
- Portable
- Suction regulator valve and gauge
- Automatic shut off
- Reusable collection container 220v/50Hz
- 2 spare collection containers with legs

Item # 30

IV stand Emergency Kit

Specifications

- 2 hooks for suspension of solution
- Adjustable height
- Base with 4 to 5 caster wheels
- Stainless steel, chrome plated steel or enamel painted steel



containers

baked on

Item # 31

Drug Box Emergency Kit

Specifications

- Emergency drug box (tackle box)

Item # 32

Gyn Exam table with stirrups

Specifications

- Medical Gynecological examination table
- Heavy steel frame construction
- Vinyl (black or dark brown) upholstered over 5 cm foam cushion and 20 mm plywood
- Adjustable lithotomy type gynecological stirrups
- Backrest adjustable from 0° to 50° upward by manual mechanism
- Leg rest section adjustable from 0° to 90° downward by manual mechanism
- Rubber-tipped legs (no wheels)
- Open frame construction (no drawers or cabinets)
- Overall approximate dimensions: 180cm (L) x 60 cm (W) x 75 cm (H)
- Stainless steel, chrome plated steel or backed on enamel painted steel (or equivalent)
- Models with 2 or 3 drawers are preferred.



Item # 33

Examination Table

Specifications

- Medical examination table
- Hinged leg and head extension adjustable to any angle
- Heavy steel frame construction
- Sliding instrument tray extends outward from either side of table
- Mattress: vinyl upholstered over 5 cm foam cushion
 1. Rubber-tipped legs
 2. Approx 170cmx76cmx58cm
- Stainless steel, chrome plated steel, or baked on enamel painted steel

Item #34

Step Stool

- Single step for use with examination and delivery tables
- Non-slip rubber mat surface on platform
- Platform approximate dimensions:



36

- cm (L) x 25 cm (W)
- Overall approximate dimensions: 26 cm (L) x 25 cm(W)
- Tubular steel frame
- Rubber-tipped legs
- Stainless steel, chrome plated steel, or baked on enamel painted steel

Item # 35

Exam stool on wheels

Specifications

- Revolving stool
- Tubular steel frame
- Stool seat vinyl (black or dark upholstered over 5 to 7.5 cm thick cushion
- Large base spread for stability
- Twin disc caster wheels
- Adjustable height
- Stainless steel, chrome plated steel or baked on enamel painted steel (or equivalent).



brown)
foam

Item # 36

Waiting room chairs

Specifications

- Molded plastic
- Color to be determined
- Attachable to create sets of 2 to 4 seats



Item # 37

Privacy curtain

Specifications

- 3 panel paravan
- Scotch guarded material
- On casters
- 180 cms high



Item # 38

Book shelf

Specifications

- Approx 220 cm Height, 40 cm depth, 100 cm wide
- Adjustable shelves
- Metal
- Preferably shipped unassembled

Item # 39

Instrument cabinet

Specifications

- Cabinet to store instruments supplies equipment
- Stainless steel construction
- Two (2) glass-paneled hinged doors
- Five (5) adjustable shelves
- Solid side panels
- Key lockable
- Rubber tipped legs (on wheels)
- Overall approximate dimensions: 160 cm (H) x 100 cm (W) x 42 cm (D)



and

Item # 40

Office desk - large

Specifications

- Double pedestal wood desk
- 4 drawers minimum
- Modesty panel
- Approx 5 feet long x 2.5 feet deep
- Preferably shipped unassembled.

Item # 41

Manager Desk Chair with Arms

Specifications

- Mid-back

- Swivel mechanism with adjustable height
- Roller with casters
- Dark Fabric material.

Item # 42

Vertical File Cabinets

Specifications

- 4 drawers
- Metal
- For legal size hanging files.



Item # 43

Vertical Lockable File Cabinets

Specifications

- 4 drawers
- Metal
- Lockable
- For legal size hanging files.

Item # 44

Bulletin Boards

Specifications

- For wall Hanging.
- To pin on notices.
- With a 50 pin pack different colors.
- Approx. dimensions 4 ft x 3 ft
- Aluminum frame

Item #45

Microscope

- Addresses the needs of small laboratories
- Compound microscope



clinical

- High resolution
- Binocular head rotatable 360 degrees.
- 10x eyepieces.
- 10x 40x, 100x and oil immersion objectives.
- Coaxial coarse and fine adjustment knobs
- Halogen illumination with adjustable field diaphragm.
- Dust cover
- All needed accessories and spare parts are provided.
- 220 Volts and 50 Hertz.

Item # 46

Urine Centrifuge

Specifications

- Spins up to six tubes
- Low speed of 1750 for urine analysis
- Built in timer to allow runs of 0 to 60 minutes
- With a Hold feature.
- Six place Fixed angle rotor to accommodate up to 17 mm dia x 133 mm long
- With adapter to accommodate smaller 10 to 13 mm dia x 75 mm long tubes
- With numbered rotor positions.
- Operation should stop if lid is open.
- Heavy metal base for stability.
- With rotor, six shields, thumbscrew and instruction manual.
- With all accessories for operations.
- Electrical requirements: 220V / 50 Hz.

Item # 47

Spectrophotometer

Specifications

- **Mono reading with high resolution**
- Spectral range 340 – 700 nm
- Bandwidth at least 10 nm +/- 2
- Photometric linearity: better than 1 %
- Precision: CV Less or equal to 0.5% to 0,200 A and Less or equal to 0.1% to 2,000A
- Linearity: up to 2,200 A

- Light source: Halogen lamp (12V/20W)
- Zero: Automatic
- Reading: Monochromatic and bichromatic
- Detector: Silicon photodiode
- Thermostatic control:
- Programmable temperature 23° to 40°
- Accuracy +/- 0.2 °
- Display: LCD 4 x 20 characters
- Printer:
- Type , bi-directional
- Printing speed: 40 characters/sec
- Characters per line: 40
- Paper: Thermosensitive, 80 mm wide
- Programming: Intensity printing control with on/off printer
- Calculation modes:
- Absorption/Concentration
- End point with factor or standard
- Enzyme kinetics with factor or standard.
- Differential mode with factor or standard
- Fixed time with factor or standard
- Polygonal Multi-Standard (Calibration curve)
- Programming:
- 75 locations (non volatile memory) to program up to 75 different tests, (Open System): Incorporates all points mentioned. In addition: Printer control and two washing modes (fixed volume or continuous)

Item # 48

Water bath

Specifications

- Precise temperature control
- Overhead prevention system
- Fast heat up to correct temperature
- Cover: self draining, lift off, see-through
- Digital temperature display
- Stainless steel reservoir easy to empty.
- 10-liter size

- High-gabled
- Smoke-tint polycarbonate cover
- Drain pump
- Lighted on-off switch
- Oversize air-jacketed heating element
- Stainless steel sample tray
- Push button reset circuit breaker
- -20C to + 150C thermometer

Item # 49

Cell counting chamber

Specifications

- For accurate white and red blood cell and platelet counts
- With 2 counting areas
- Made of molded glass
- Each counting area with a thin metal layer each with 400 small squares in central 1mm square.
- Under microscope partitions should appear as white lines on a dark base.
- Smooth capillary action for precise loading and more even cell distribution.
- With two 0.4 mm cover glasses
- V-shaped slashes at each loading side of both counting chambers.
- With 10 replacement cover glasses.

Item #50

Automatic Pipettes

- Variable volume single channel
- Robust lightweight design
- Slim line tip ejector allows pipetting tubes
- Smooth plunger action
- Compatible with a wide range of tips
- High degree of accuracy and precision
- Easy maintenance and calibration tool



into narrow

supplied

- Wide range of volumes in both fixed and variable styles
- Volume range: 0.5-10 ul 100-1000 ul

Item # 51

Centrifuge tubes

Item # 52

Blood drawing chair

Specifications

- With two armrests adjustable to different angles.
- To support any patient's arm from shoulder to wrist in secure straight position.
- Draw blood from either arm
- Chair made of fiberglass with modified "A" frame for stability
- With drawer under each side for storage of blood-drawing supplies.

Item # 53

Tourniquet

Specifications

- Made of treated live gum rubber, self-adhesive.
- Firm, constant grip.
- Adjustable for any tension.

Item # 54

Timer

Item # 55

Reagent pipettes

Item # 56

Reagent flasks



Item # 57

Test Tube Racks

Specifications

- Stainless Steel
- 24 tubes up to 16 diameter.



mm

Item # 58

Test tubes

APPENDIX C:

Quantities Required per Kit:

<u>Item #</u>	<u>Item Description</u>	Quantity for each clinic	Total Quantity for 600 Clinics
<u>Basic Equipment Kits</u>			
1	Goose Neck lamp	1	600
2	EPI sterilizer or autoclave	1	600
3	Adult scale with height measurement	1	600
4	Pediatric scale	2	1200
5	Infant length board	1	600
6	Mayo stand/instrument tray	1	600
<u>Basic Instrument Kit</u>			
7	Otoscope Ophthalmoscope set	1	600
8	Sphygmomanometer	3	1800
9	Stethoscope, Pediatric	3	1800
10	Fetal Heart Detector	1	600
11	Stethoscope, Adult	3	1800
12	Thermometer, Oral	12	7200
13	Thermometer, Rectal	12	7200
14	Reflex hammer	3	1800
15	Tuning forks (256 & 512 hz.)	3	1800
16	Glucometer and test strips	3	1800
17	Peak flow meter, adult and child size	3	1800
18	Vaginal speculae (at least 3 sizes – small, med., large)	3	1800
19	IUD kits (multitoothed tenaculum, uterine sound, long ring forceps, long dressing forceps)	1	600

20	Suture instrument kits (needle holder, small curved hemostat, scalpel handle, Adson forceps, suture scissors, small curved Metzenbaum scissors)	3	1800
21	Stainless steel bowls, 3 sizes per set	3	1800
22	Kidney basins, 2 sizes per set	3	1800
23	Dressing scissors	3	1800
24	Sharps disposal containers	3	1800
25	Busckets for decontamination of instruments	3	1800
26	Trash bucket with cover (med. size)	3	1800
27	Nasopharyngeal airways for emergency kit	1	600
28	Ambubag for emergency kit	1	600
29	Suction kit for emergency kit	1	600
30	IV Stand for emergency kit	1	600
31	Drug box for emergency kit	1	600
	<u>Furniture kit</u>		
32	Gyn Exam table with stirrups	1	600
33	Basic Exam table	1	600
34	Step stool for exam table	1	600
35	Exam stool on wheels	1	600
36	Waiting room chairs	6	3600
37	Privacy curtains	3	1800
38	Book shelf	1	600
39	Instrument cabinet with lock	1	600
40	Office desks	1	600
41	Office chairs	1	600
42	Vertical file cabinet	1	600
43	Lockable vertical file cabinet	1	600
44	Bulletin Boards large size	3	1800
	<u>Laboratory kit</u>		
45	Microscope and light source	1	600
46	Urine centrifuge	1	600
47	Spectrophotometer	1	600
48	Water bath	1	600

49	Cell counting chamber	1	600
50	Automatic pipettes	1	600
51	Centrifuge tubes	1	600
52	Blood drawing chair	1	600
53	Tourniquet	1	600
54	Timer	1	600
55	Reagent pipettes	12	7200
56	Reagent flasks	12	7200
57	Test tube racks	2	1200
58	Test tubes	48	28800

**APPENDIX D: Letters from the Iraqi MOH Describing the
PHC Kit Delivery Process**